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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,272	10/21/2003	Jang Sik Cheon	SUN0031US	4945
23413 7590 02/22/2010 CANTOR COLBURN, LLP 20 Church Street 22nd Floor Hartford, CT 06103				
EXAMINER BODDIE, WILLIAM				
ART UNIT		PAPER NUMBER		
2629				
NOTIFICATION DATE		DELIVERY MODE		
02/22/2010		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

### Office Action Summary

**Application No.**

10/691,272

**Applicant(s)**

CHEON ET AL.

**Examiner**

WILLIAM L. BODDIE

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 9-12, 17-23 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-23 and 26-30 is/are allowed.
- 6) ☒ Claim(s) 9-12 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In an amendment dated, December 28<sup>th</sup>, 2009, the Applicant amended claims 9, 23 and cancelled claim 31. Currently claims 9-12, and 17-23 and 26-30 are pending.

#### ***Continued Examination Under 37 CFR 1.114***

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 28<sup>th</sup>, 2010 has been entered.

#### ***Response to Arguments***

3. Applicant's arguments with respect to claims 9-12, and 17-23 and 26-30 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9-10 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perret, Jr. et al. (US 5,736,686) in view of Anderson (US 4,470,045) and further in view of Fitzgibbons (US 3,838,909).

**With respect to claim 9**, Perret, Jr. discloses, an optical cursor control device (graphic digitizing tablet) having a light concentrating pad (fig. 1) and an optical pointing device moved on the light concentrating pad by an operator (col. 1, lines 14-19), the light concentrating pad comprising:

- a lower reflecting plate (15 in fig. 1; col. 3, line 63),
- side reflecting plates (52 in fig. 1) contacting a selected edge of the lower reflecting plate (bottom right of fig. 1 edge) and extending upwardly from the selected edge of the lower reflecting plate (clear from fig. 1);

- an upper transparent plate (49, 56 in fig. 1) contacting the side reflecting plates (fig. 1), being parallel to the lower reflecting plate (fig. 1),

- a light concentrating plate (47 in fig. 1);

wherein the lower reflecting plate, the upper transparent plate, the side reflecting plates and the light concentrating plate function as one unit to constitute the light concentrating pad (fig. 1),

wherein the lower reflecting plate, the upper transparent plate, the side reflecting plates and the light concentrating plate define an optical wave guide (fig. 1).

Perret, Jr. does not expressly disclose that the light concentrating plate is attached to an edge of the lower reflecting plate and separated from the upper transparent plate.

Anderson discloses, a backlight lighting apparatus (fig. 4) comprising:  
a lower reflecting plate (48 in fig. 4);

an upper transparent plate (40 in fig. 4), being parallel to the lower reflecting plate (fig. 4) and protruding from a remaining edge of the lower reflecting plate not including the selected edge (bottom of fig. 4)), having an extension portion protruding from the remaining edge of the lower reflecting plate (42 in fig. 4), and an opening in the extension portion thereof (42 in fig. 4), the opening being spaced apart from edges of the upper transparent plate;

a light concentrating plate (54 in fig. 4) attached to an edge of a lower reflecting plate (48 in fig. 4), wherein the light concentrating plate is disposed on another portion of the sides of the optical waveguide (fig. 4) and under an opening (42 in fig. 4) of the upper transparent plate (40 in fig. 4), extending diagonally and upwardly from the lower reflecting plate to the upper transparent plate (fig. 4), contacting the side reflecting plates and the upper transparent plate (fig. 4),

where the light concentrating plate contacts and reflects external light passing through the opening of the upper transparent plate (18 in fig. 4), and

wherein a portion of the external light is introduced into the optical wave guide, reflected from the lower reflecting plate and the side reflecting plates, and passes through the upper transparent plate (fig. 4) at substantially a same time (light will inherently move at a speed of light which is deemed to satisfy the time limitations claimed.).

Anderson and Perret, Jr. are analogous art because they are both from the same field of endeavor namely backlighting systems.

At the time of the invention it would have been obvious to one of ordinary skill in the art to attach the light concentrating plate of Perret, Jr. to an edge of the lower reflecting plate and separate from the upper transparent plate as taught by Anderson.

The motivation for doing so would have been the well-known benefits of uniform brightness, preventing light leakage, and decreasing power consumption by a significant amount.

Neither Anderson nor Perret, Jr. expressly disclose wherein the opening is spaced apart from edges of the upper transparent plate.

Fitzgibbons discloses, an opening (22 in figs. 1-2) that is spaced apart from edges of an upper plate (20 in figs. 1-2).

Fitzgibbons, Anderson and Perret, Jr. are analogous art because they are both from the same field of endeavor namely backlighting systems.

At the time of the invention it would have been obvious to one of ordinary skill in the art to construct the case of Perret, Jr. and Anderson with the opening of Fitzgibbons.

The motivation for doing so would have been the well-known benefits of decreased manufacturing costs and overall product weight.

**With respect to claim 10**, Anderson, Fitzgibbons and Perret, Jr. disclose, the optical cursor control device according to claim 9 (see above).

Perret, Jr. further discloses, wherein the upper transparent plate includes regular patterns drawn on a surface thereof (col. 4, lines 42-46).

**With respect to claim 17**, Anderson, Fitzgibbons and Perret, Jr. disclose, the optical cursor control device according to claim 9 (see above).

Perret, Jr. further discloses, a light source (16 in fig. 1) emitting a light toward the light concentrating plate, wherein the light concentrating plate reflects the light from the light source into the optical wave guide (clear from fig. 1).

6. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perret, Jr. et al. (US 5,736,686) in view of Anderson (US 4,470,045) and further in view of Fitzgibbons (US 3,838,909) and Lyon (US 4,521,772).

**With respect to claim 11**, Anderson, Fitzgibbons and Perret, Jr. disclose, the optical cursor control device according to claim 9 (see above).

Neither Yamamoto nor Anderson nor Perret, Jr. expressly disclose further detail regarding the optical pointing device.

Lyon discloses, an optical pointing device comprises;

a case (108 in fig. 22) including a lower panel, the lower panel having an opening (clear from fig. 22);

an optical sensor (120 in fig. 22) mounted inside the case for sensing reflected light introduced into the case through the opening (fig. 22); and

a printed circuit board (110 and 112 in fig. 22) for processing a signal outputted from the optical sensor to generate an output signal that corresponds to a position of the case.

Lyon, Anderson, Fitzgibbons and Perret, Jr. are analogous art because they are all from the same field of endeavor namely, backlight control systems.

At the time of the invention it would have been obvious to one of ordinary skill in the art to construct the optical pointing device of Anderson, Fitzgibbons and Perret, Jr. as taught by Lyon.

The motivation for doing so would have been due to its high reliability over long periods of time (Lyon; col. 2, lines 20-24).

**With respect to claim 12**, Lyon, Anderson, Fitzgibbons and Perret, Jr. disclose, the optical cursor control device according to claim 11 (see above).

Lyon further discloses, wherein the optical pointing device further comprises: a switch module disposed on the printed circuit board (114, 115 in fig. 22); and a button disposed at the top surface of the case to turn on or off the switch module (116 in fig. 22).

***Allowable Subject Matter***

7. Claims 18-23 and 26-30 are allowed.

***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM L. BODDIE whose telephone number is (571)272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/W. L. B./  
Examiner, Art Unit 2629  
2/20/2010